



July 10, 2003
NUH03-03-50

Mr. Christopher Regan
Spent Fuel Project Office, NMSS
U. S. Nuclear Regulatory Commission
11555 Rockville Pike M/S O13-D-13
Rockville, MD 20852

Subject: Request to Amend CoC 1004 Technical Specifications (TS).

References: 1. Application for Amendment No. 7 to the NUHOMS® Certificate of Compliance No. 1004 (TAC NO. L23436).

Dear Mr. Regan:

In conjunction with the reference application currently under review at the SFPO, TN requests that the staff review and amend 3 additional CoC 1004 TS. A marked up copy of the affected TS pages are enclosed herewith.

The proposed changes are fairly minor and are being requested to eliminate discrepancies or errors in these 3 TS. Also enclosed herewith is a brief description of each change and supporting justification.

Should you or your staff require additional information to support review of this application, please do not hesitate to contact me at 510-744-6053.

Sincerely,



U. B. Chopra

Licensing Manager

Docket 72-1004

Enclosures: 1. As stated.

NMSSOJ

Attachment 1 to NUH03-03-50

Change 1: Table 1-1b, Page A-9: Under the heading “Alternate Nuclear Parameters”, the row entitled “BurnUp”, remove the words “*and per Figure 1.1*”.

Justification: This Figure 1.1 (page A-35) is only applicable for PWR Fuel. The words were erroneously added when Amendment No. 4 was issued, even though there was no change requested for 52B DSC per Amendment No. 4.

Change 2: Page A-48, Revise the Limit/Specification of TS 1.2.4a for 61BT, 32PT, and 24PHB DSC Helium Leak Rate of Inner Seal Weld, to say “ $\leq 1.0 \times 10^{-7}$ reference cubic centimeters per second (c/s)”. Also, revise the Action Statement of this TS to say “...exceeds 1.0×10^{-7} reference cc/s:”.

Justification: This is an inconsistent statement and is an inadvertent carryover of the statement from TS 1.2.4, wherein the leak rate is indeed based on the highest DSC pressure. Per Objective 1 of this TS, the DSC is specified to be “leak tight” as defined in ANSI N14.5-1997. This leak tight definition on page 1 of the ANSI N14.5 states, in part, that “...demonstrate a leakage rate less than or equal to 1×10^{-7} reference cc/s, of air at an upstream pressure of 1-atmosphere (atm) absolute (abs) and a downstream pressure of 0.01 atm abs or less”. In addition, page 7-1, second last para of the SER for 61BT Amendment No. 3 also repeats the leak tight design of the DSC and the corresponding leak rate test criteria. Specification of a requirement of the “highest DSC limiting pressure” is inconsistent with ANSI N14.5.

Change 3: Page A-49, TS 1.2.5, delete “(Reference 8.3 of FSAR)”.

Justification: This TS is applicable to all DSCs. The specific FSAR Reference 8.3 is applicable only for the 24P DSC and 52B DSC. 61BT, 32PT, 24PHB DSCs are all designed to different editions of the ASME Code as listed in their respective Sections of the FSAR Appendices (K, M or N).

Table 1-1b
BWR Fuel Specifications for Fuel to be Stored in the
Standardized NUHOMS®-52B DSC

Title or Parameter	Specifications
Fuel	Only intact, unconsolidated BWR fuel assemblies with the following requirements
Physical Parameters	
Maximum Assembly Length (unirradiated)	176.16 in
Nominal Cross-Sectional Envelope*	5.454 in
Maximum Assembly Weight	725 lbs
No. of Assemblies per DSC	≤ 52 intact channeled assemblies
Fuel Cladding	Zircaloy-clad fuel with no known or suspected gross cladding breaches
Nuclear Parameters	
Fuel Initial Lattice Enrichment	≤ 4.0 wt. % U-235
Fuel Burnup and Cooling Time	Per Table 1-2b
Alternate Nuclear Parameters	
Initial Enrichment	≤ 4.0 wt. % U-235
Burnup	≤ 35,000 MWd/MTU
Decay Heat	≤ 0.37 kW per assembly
Neutron Source	≤ 1.01 x 10 ⁸ n/sec per assy with spectrum bounded by that in Chapter 7 of FSAR
Gamma Source	≤ 2.63 x 10 ¹⁵ g/sec per assy with spectrum bounded by that in Chapter 7 of FSAR

*Cross-Sectional Envelope is the outside dimension of the fuel channel.

1.2.4a 61BT, 32PT, and 24PHB DSC Helium Leak Rate of Inner Seal Weld

Limit/Specification:

$\leq 1.0 \times 10^{-7}$ reference cubic centimeters per second (cc/s).

Applicability:

This specification is applicable to the inner top cover plate seal weld of 61BT, 32PT, and 24PHB DSC only.

Objective:

1. To demonstrate that the top cover plate to be "leak tight", as defined in "American National Standard for Leakage Tests on Packages for Shipment of Radioactive Materials," ANSI N14.5 - 1997.
2. To retain helium cover gases within the DSC and prevent oxygen from entering the DSC. The helium improves the heat dissipation characteristics of the DSC and prevents any oxidation of fuel cladding.

Action:

If the leak rate test of the inner seal weld exceeds 1.0×10^{-7} reference cc/s:

1. Check and repair the inner seal weld.
2. Check and repair the inner top cover plate for any surface indications resulting in leakage.

Surveillance:

After the welding operation has been completed, perform a leak test with a helium leak detection device.

Bases:

The 61BT, 32PT, and 24PHB DSC will maintain an inert atmosphere around the fuel and radiological consequences will be negligible, since it is designed and tested to be leak tight.

1.2.5 DSC Dye Penetrant Test of Closure Welds

Limit/Specification:

All DSC closure welds except those subjected to full volumetric inspection shall be dye penetrant tested in accordance with the requirements of the ASME Boiler and Pressure Vessel Code Section III, Division 1, Article NB-5000. The liquid penetrant test acceptance standards shall be those described in Subsection NB-5350 of the Code. ||

Applicability:

This is applicable to all DSCs. The welds include inner and outer top and bottom covers, and vent and syphon port covers.

Objective:

To ensure that the DSC is adequately sealed in a redundant manner and leak tight.

Action:

If the liquid penetrant test indicates that the weld is unacceptable:

1. The weld shall be repaired in accordance with approved ASME procedures.
2. The new weld shall be re-examined in accordance with this specification.

Surveillance:

During DSC closure operations. No additional surveillance is required for this operation.

Bases:

Article NB-5000 Examination, ASME Boiler and Pressure Vessel Code, Section III, Division 1, Sub-Section NB. ||